TAURO TECHNOLOGIES

TT310 AGX Orin/Thor Controller

For Robotics and Ground Vehicle Applications

Key Features

▶ Rugged fanless platform

▶ IP67 waterproof and dustproof

▶ x4 Gigabit Ethernet (PoE+)

▶ x1 Gigabit Ethernet (Non-POE)

▶ Wi-Fi/4G/5G

▶ Advanced AI Performance

Applications

▶ Autonomous Transportation

▶ Mining

▶ Agriculture

▶ Robotics

▶ UAV

Overview

The TT310 AGX Orin/Thor is a rugged, IP67 waterproof compute platform, engineered to be fully compatible with both NVIDIA Jetson AGX Orin and Jetson Thor modules, allowing flexible configuration based on customer requirements. It delivers exceptional AI performance with low power consumption in a compact form factor. Depending on the module, it provides up to 275 TOPS with Jetson AGX Orin, and up to 1050 FP8 TFLOPs / 2100 FP4 TFLOPs with Jetson Thor, making it suitable for autonomous vehicles, UAVs, and Robotics, enabling real-time video processing and AI workloads to simultaneously transcode up to 22 1080p video streams.

The waterproof USB 3.2 Type-C connector provides 4K Display Port output for ADAS applications involving real-time surround-view awareness. 5x waterproof M12 GbE ports are also provided for high-speed data communication.

The TT310 supports 18V to 36V wide-range DC input with ignition power control, 2x isolated CAN bus ports, an RS-232 port, and an isolated RS-485 port, making it ideal for in-vehicle deployment. Expansion options include M.2 and mini-PCIe sockets for 5G/LTE or Wi-Fi modules and M.2 NVMe storage for additional storage needs. It also provides an MCU for system monitoring. With a streamlined waterproof design, the TT310 is an all-in-one solution for industrial vehicles, outdoor robotics, and edge AI inspection systems.
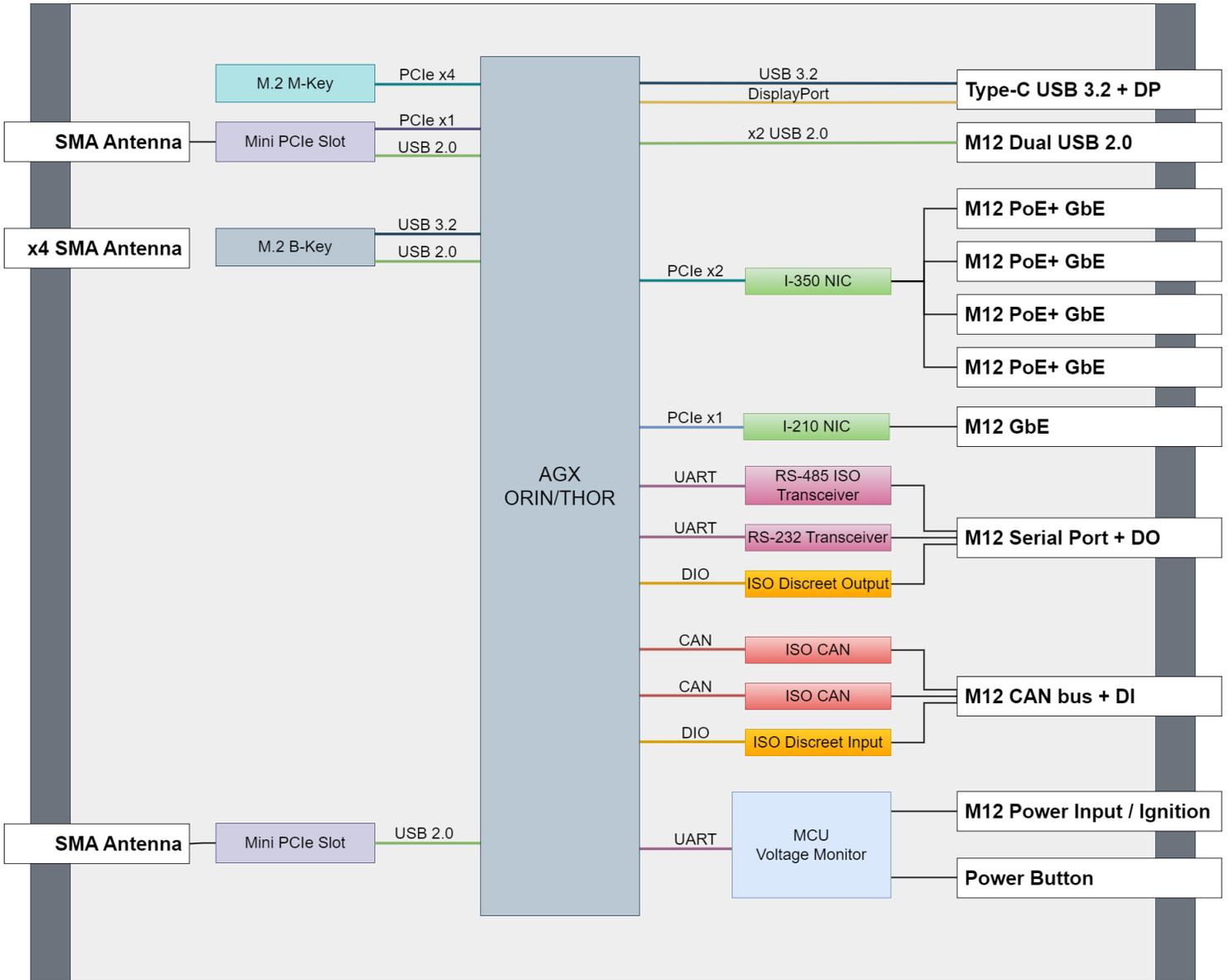
Key Advantages

▶ NVIDIA Jetson AGX Orin 32GB/64GB SOM up to 275 TOPS

   OR

   NVIDIA Jetson AGX Thor 128GB SOM up to 2100 FP4 TFLOP

▶ Rugged IP67 Waterproof Design

▶ 4K Graphics & High-Speed Communication

▶ M.2 and Mini PCIe Expansion Slots for LTE/5G/Wi-Fi and Storage

▶ MCU for System Monitoring

Block Diagram

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Specifications

SOM	NVIDIA® Jetson AGX Orin™ up to 275 TOPS NVIDIA® Jetson AGX Thor™ up to 1050 FP8 TOPS/2100 FP4 TOPS
SYSTEM MEMORY	32GB/64GB LPDDR5 @ 3200 MHz on SOM 128GB LPDDR5x 4266MHz 256-bit, 273GB/s on Jetson AGX Thor™ SOM
DISPLAY INTERFACE	USB Type-C Display Port
ETHERNET	4x GbE LAN POE+ M12 Interface
	1x GbE LAN Non-POE
I/O	USB 3.2 Type-C + DP
	2x USB 2.0
	Serial Ports + Isolated DO (1x isolated RS-485, 1 x RS-232)
	2x isolated CAN 2.0 + Isolated DI
EXPANSION	1x M.2 PCIe Slot B-key (for LTE/5G)
	1x M.2 PCIe Slot M-Key (for NVMe SSD)
	1x Mini PCIe Slot (USB 2.0 + PCIe x1)
	1x Mini PCIe Slot (USB 2.0)
INDICATOR	Power LED
OS SUPPORT	Ubuntu 20.04
POWER	18V to 36V DC input with Ignition Control
	Maximum 330W total power budget
DIMENSION	235 mm (W) x 260 mm (D) x 122 mm (H)

Environmental

OPERATING TEMPERATURE	-10°C to 60°C
STORAGE TEMPERATURE	-40°C to 85°C
HUMIDITY	10% to 90%, non-condensing
VIBRATION	Operating, MIL-STD-810H, Method 514.8, Category 4
SHOCK	Operating, MIL-STD-810H, Method 516.8, Procedure I
EMC	Designed to meet FCC, CE and UL certifications, where applicable

Ordering Options

Part Number	Description
TT310-100-000-000	TT310 with NVIDIA Jetson AGX Orin 32GB
TT310-200-000-000	TT310 with NVIDIA Jetson AGX Orin 64GB
TT310-300-000-000	TT310 with NVIDIA Jetson AGX Thor 128GB

The system can be customized for specific customer requirements, contact Tauro Technologies sales for details.

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